

A-Area Burning/Rubble and Rubble Pits

Background

The A-Area Burning/Rubble Pits (ABRP) Operable Unit is located approximately 1.5 miles south of M-Area on the Savannah River Site (SRS). The ABRP Operable Unit includes the A-Area Burning/Rubble Pits, 731-A and 731-1A, the A-Area Rubble Pit (ARP), 731-2A, a potential pit, located approximately 500 feet east of the Pits area, and a depression area, located approximately 300 feet east of the potential pit. Burning/Rubble Pits 731-A and 731-1A were approximately 250-feet long by 22-feet wide by 10-feet deep. The 731-2A rubble pit is located approximately 50 feet east of the burning/rubble pits and measures approximately 650-feet long by 40-feet wide by 20-feet deep.

Constructed in 1951, the burning/rubble pits were shallow, unlined, earthen pits used for the disposal and monthly burning of drummed solvents, waste oils, degreasers, rags, paper, plastics, wood, cardboard, and rubble. In 1973, SRS stopped its practice of burning these wastes and covered the pit debris with a layer of native soil. The pits were then filled to capacity with rubble such as paper, wood, empty galvanized steel barrels, and cans. A layer of native soil was placed over the pits when they reached their capacity in 1978. All burning/rubble pits were closed by 1981.

The rubble pit received construction waste from the early 1950s until the early 1970s. No specific disposal records are known to exist for the ARP; however, rubble pits were used to dispose of dry inert rubble such as concrete, metal, brick, tile, asphalt, high-density plastics, glass, rubber products, wood products, and non-returnable empty drums. No radioactive or hazardous material is reported to have been disposed of at the unit, and no burning took place at this rubble pit. The pit was backfilled with native soil and seeded after its last use in 1983.

In 2000, a close inspection of previously unavailable aerial photography revealed the existence of a potential trench beneath the active A-Area Ash pile and a suspected ditch to the north of the Ash Pile. A Work Plan was developed to address characterization of these areas. The additional characterization was performed in 2001 and an addendum to the Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation and Baseline Risk Assessment (RFI/RI/BRA) is currently under development to document the results.

Environmental Concerns

In 1988 and 1991, SRS conducted preliminary soil and soil gas screenings of the area. In 1998, SRS conducted further investigations by using ground-penetrating radar to

define the pit boundaries and by collecting soil borings. Soil at Rubble Pit 731-2A was found to be contaminated with benzo(a)pyrene (BaP).

Groundwater monitoring of the ARP series wells was performed from 1984 through the fourth quarter of 1991, to characterize impacted secondary media. The groundwater beneath the area was found to be contaminated with volatile organics; namely trichloroethylene, tetrachloroethylene and methylene chloride.

Environmental Actions and Plans

In 1996, SRS submitted the RCRA RFI/RI/BRA Report for this Operable Unit to the U.S. Environmental Protection Agency (USEPA) and the South Carolina Department of Health and Environmental Control (SCDHEC). The report was approved by the agencies in 1997. The RFI/RI/BRA identified trichloroethylene, tetrachloroethylene, and methylene chloride as groundwater constituents of concern; and it identified BaP as a constituent of concern in the surface soil at Rubble Pit 731-2A.

In 1997, SRS submitted a Record of Decision (ROD) to USEPA and SCDHEC that described the preferred alternative for remediating the Operable Unit. The ROD recommended installation of a one-foot thick soil cover over Rubble Pit 731-2A and implementation of institutional controls that would restrict the use of the land to industrial activities and limit human exposure to the soil and groundwater. The ROD was not approved.

In 1998, SRS submitted a new Operable Unit strategy to USEPA and SCDHEC, and in 1999, SRS submitted an Interim Record of Decision (IROD). The IROD was approved in 2000.

The interim actions are as follows:

- Groundwater – Installation of a combination of air sparging and passive soil vapor extraction (PSVE). The PSVE utilizes the SRS-patented BaroBall™ check-valve to remove contaminated soil vapor. A staged approach will be used to implement the groundwater remediation system. Stage 1 consists of a combination of air sparge and PSV wells. Operational results from Stage 1 will be used to design the Stage 2 remediation system.
- Surface Soil – Placement of a soil cover and implementation of institutional controls at the Rubble Pit 731-2A. This constitutes the final remedy for the pit.

Placement of the soil cover over Rubble Pit 731-2A and construction of the Stage 1 groundwater remediation system were completed in September 2001. Data obtained during the first year of operation of Stage 1 will be evaluated and utilized to augment the Stage 2 system approach.